

**CURICTA JOHNPOLHEMI (HETEROPTERA: NEPIDAE): A NEW
WATERSCORPION SPECIES FROM BRAZIL**

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Abstract.—A new species of the New World waterscorpion genus *Curicta* Stål from Brazil is described. This species is dedicated to the eminent heteropterist, John T. Polhemus, in celebration of his 70th birthday.

This new curictan species is dedicated to Dr. John T. Polhemus in celebration of his 70th birthday. Over my ten years of acquaintance with John, I have benefited in more ways than I can count from his mentoring and friendship. I still remember vividly my first visit to his home. My Ph.D. advisor had strongly recommended that I visit with John to discuss ideas for a dissertation project. More than a little bit in awe of Polhemus, I had spent the weeks prior to the visit studying the literature on my chosen group, the waterscorpions. Upon arrival in Englewood, John and his wife Irma treated me to pleasant conversation and a relaxing beer on their back porch. Just when the beer was beginning to have an effect, John announced it was time to get to work. We descended into his basement museum/library where I was set down at a microscope and a waterscorpion was placed in front of me. “What is it?” asked John. Fortunately, my blood alcohol level was high enough at that point so that I didn’t freeze up in a flight-fright response. Instead, I spent a minute or so scanning the insect and then brazenly announced that it looked like a *Telmatotrepes* species. (Now, I had never seen a *Telmatotrepes* waterscorpion, which are rather rare in collections, but, in my “relaxed” state, the bug before me seemed to resemble the pictures and descriptions of *Telmatotrepes* I had studied prior to my visit.) “Exactly!” said John, “It looks like a *Telmatotrepes* but it isn’t! And I want you to find what it *really* is!” “Sure, I can do that,” I replied after taking another long swig on my beer. Thus, began my career as an heteropterist. During that same visit John launched me on my dissertation project, a revision of *Curicta*, and then he nurtured me through that effort with patience and a penetrating, yet kindly, criticism of my work. In subsequent years, John has continued to be unfailingly supportive of all my efforts through generous specimen loans and forays deep into his library to solve knotty nomenclatural problems. I know that John is similarly helpful to many, many other heteropterists around the world. How he manages to do so and, at the same time, maintain his oftentimes frenetic travel/collecting schedule and phenomenal productivity is nothing short of amazing.

In short, whatever success I have achieved as an heteropterist I owe in large part to John Polhemus. And while I know that I will never be able to match his productivity, I hope that I will never forget to emulate his generosity and kindness.

METHODS AND MATERIALS

This description is templated from the species descriptions in Keffer's 1996 revision of *Curicta*. The reader is also referred to that revision for an extensive discussion of characters, a key to species, and a cladistic analysis of the genus. Illustrations were produced with a camera lucida. All measurements given are in mm.

***Curicta johnpolhemi*, new species**

Figs. 1-4

Description. *Measurements.* Holotype female (no other specimens known): length, 16.1; profemoral length, 5.0; siphons, 8.5.

Color: Dark brown. Pronotum and hemelytra mottled with lighter areas. Prosternum dark brown medially, lighter laterally. Meso- and metasterna light brown, mottled with darker areas. Abdominal dorsum reddish. Abdominal sterna, including operculum, dark brown laterally, mottled dark and light brown medially. Abdominal parasterna reddish brown with light brown mottling. Abdominal laterotergites dark brown with lighter mottling. Protibia and tarsus yellow. Profemur dark brown with lighter mottling. Meso- and metathoracic legs dark brown with lighter mottling; tibiae and tarsi with distal dark brown annulus.

Structural characteristics. Body elongate (Fig. 1): length $4.6\times$ maximum width. Eye width $0.5\times$ interocular distance. Vertex broadly convex; without median longitudinal carina. Lobe of antennal segment 2 less than $0.5\times$ length of 3.

Pronotum elongate; lateral length $1.4\times$ posterior width. Lateral margins parallel midway, divergent posteriorly and anteriorly. Transverse sulcus incomplete. Median longitudinal sulcus very shallow; obsolescent in posterior $\frac{2}{3}$'s. Median longitudinal ridges rounded. Lateral longitudinal sulci shallow. Lateral longitudinal ridges rounded. Granulations in midline sulcus and on humeral lobes. Posteroventral extension of pronotum meet in ventral midline at junction of pro- and mesosterna.

Scutellum width less than length. Trident pattern indistinct; longitudinal section of lateral prongs appears convex medially.

Hemelytra lateral margins subparallel from apex of scutellum to base of membranes, narrower anteriorly and posteriorly. Metathoracic wings fully developed.

Prominent carinae on bilateral plates of last abdominal tergum form dome-like structure in distal $\frac{2}{3}$'s which has its greatest elevation along the midline (Fig. 2); tomentose distally.

Prosternum in lateral view not swollen. Mesosternum without midline groove; no elevated carinae or bands of hair lateral to midline. Parasterna of last abdominal segment without distal processes (Fig. 3). Posterior margin of operculum extends beyond distal margin of parasterna.

Procoxae $0.47\times$ profemoral length. Two profemoral teeth; distance from base of femur to tip of anteroventral profemoral tooth $0.47\times$ total profemoral length (Fig. 4). Profemur moderately arched beyond profemoral teeth. Single row of tubercles in profemoral sulcus evident in distal $\frac{2}{3}$'s; no teeth in sulcus distally.

Metafemora when extended posteriorly just reach anterior margin of sternum 6.

Female genitalia: Gp2 arched dorsomedially.

Discussion. The prominent carinae of the last abdominal tergum are diagnostic for this species. *Curicta scorpio* Stål and *C. pronotata* Kuitert, both Central American

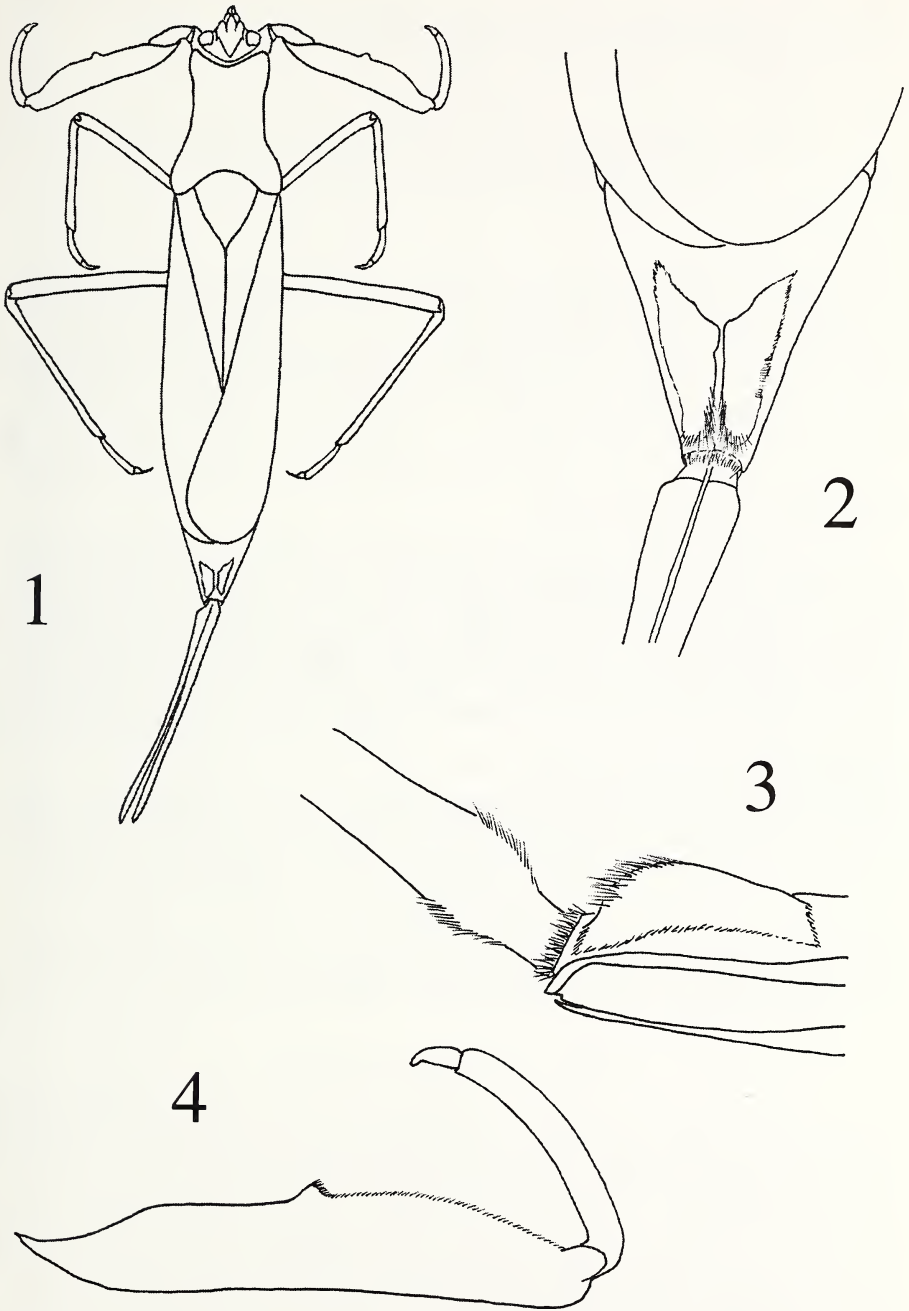


Fig. 1-4. *Curicta johnpolhemi*, n.sp. 1. Dorsal habitus. 2. Last abdominal segment (dorsal view). 3. Last abdominal segment (lateral view). 4. Profemur, tibia, tarsus (anterior view).

species, also have prominent carinae on the last abdominal tergum but their carinae are paramedial and therefore do not together form a dome-like structure as occurs in *C. johnpolhemi*. *Curicta bilobata* Kuitert, a South American species, was originally diagnosed, in part, by two large plates on the dorsum of the last abdominal. However, upon examination of the male holotype, and only known specimen for the species, Keffer (1996) discovered that these "plates" were actually the result of deformation of the last abdominal tergum by a partially extended phallus. *Curicta bilobata* is readily distinguished from *C. johnpolhemi* by having only one profemoral tooth.

In South America, *C. johnpolhemi* is among the smallest curictans. Only *C. pelleranoi* DeCarlo and *C. bonaerensis* (Berg) have comparably sized females but these two species have only one profemoral tooth while *C. johnpolhemi* has two. By general facies, *C. johnpolhemi* might initially be mistaken for one of two other South American species, albeit a very small example of each: *C. carinata* Kuitert and *C. granulosa* DeCarlo. Both of these species, however, have a well defined carina on the vertex, and either carinae (*carinata*) or dense bands of hair (*granulosa*) on the mesosternum. *Curicta johnpolhemi* is without either a carina on the vertex or carinae/bands of hair on the mesosternum.

Three characters indicate that this new species is most closely allied with the Central and North American species, *C. scorpio*: carinae on the last abdominal terga, proximal profemoral teeth, and the absence of processes on the last abdominal parasterna. As already mentioned two species, *C. scorpio* and *C. pronotata*, have abdominal carinae. Several curictans have proximal femoral teeth: *C. scorpio*, *C. pronotata*, *C. hungerfordi* Kuitert, and *C. peruviana* Kuitert and some, but not all, specimens of *C. granulosa* DeCarlo, and *C. carinata* Kuitert. Only *C. scorpio* lacks parasternal processes.

Distribution. Brazil: Minas Gerais.

Type. Holotype, female, BRAZIL, **Minas Gerais:** 14 km NE Diamantina, Brazil Rd. 367, 18°10.08'S, 43°33.57'W, 8.xi.97, T. J. Henry. Deposited in the National Museum of Natural History, Smithsonian Institution, Washington, DC (USNM).

LITERATURE CITED

- Keffer, S. L. 1996. Systematics of the New World waterscorpion genus *Curicta* Stål (Heteroptera: Nepidae). J. New York Entomol. Soc. 104(3-4):117-215.